

CLAIMS

1. A protein having a molecular weight of about 24kD and capable of specifically binding to a protein of hepatitis C virus, or a functionally equivalent variant or fragment thereof.
- 5
2. A protein or a functionally equivalent variant or fragment thereof according to claim 1 which is functionally unglycosylated.
- 10
3. A protein or a functionally equivalent variant or fragment thereof according to claim 1 or 2 wherein the protein is a transmembrane protein.
- 15
4. A process for the preparation of a protein or a functionally equivalent variant or fragment thereof according to any one of claims 1 to 3 comprising the step of culturing cells exhibiting binding to an HCV protein and purifying from a cell preparation a protein according to any one of claims 1 to 3.
- 20
5. A process according to claim 4 wherein the cell preparation is a plasma cell membrane preparation.
- 25
6. A process according to claim 4 or 5 wherein the cells are selected and cloned to provide hyperexpression of the protein according to any one of claims 1 to 3.
- 30
7. A process according to any one of claims 4 to 6 wherein the cell preparation is subjected to an ammonium sulphate precipitation purification step employing ammonium sulphate at between 33 and 50%
- 35
8. A process according to any one of claims 4 to 7 wherein the purification involves at least one step of hydrophobic interaction chromatography.

9. A process according to any one of claims 4 to 8 wherein the process involves at least one step of acetone precipitation

5 10. A process according to any one of claims 4 to 8 wherein comprising the steps of:

10 i) preparing a plasma cell membrane preparation of mammalian cells selected for hyperexpression of the 24kd protein of the invention,

15 ii) subjecting the preparation to ammonium sulphate precipitation at less than 33% saturation and retaining the supernatant,

20 iii) subjecting the supernatant to ammonium sulphate precipitation at between 33 and 50% saturation and retaining the precipitate, and

iv) resuspending the precipitate and subjecting it to hydrophobic interaction chromatography

11. A method for treating an infection of HCV comprising administering to a patient an amount of a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof effective to reduce the infectivity of the virus.

25 30 35 12. A pharmaceutical composition comprising a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof, optionally as a pharmaceutically acceptable salt, in combination with a pharmaceutically acceptable carrier.

13. A process for preparing a pharmaceutical composition, in which a protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment

thereof is brought into association with a pharmaceutically acceptable carrier.

14. A protein according to any one of claims 1 to 3 or a
5 functionally equivalent variant or fragment thereof
for use as a pharmaceutical.

15. Use of a protein according to any one of claims 1 to
10 3 or a functionally equivalent variant or fragment
thereof in the manufacture of a medicament for the
treatment of an HCV infection.

16. An assay for HCV antibodies in a serum sample
15 comprising the step of allowing competitive binding
between antibodies in the sample and a known amount
of an HCV protein for binding to a protein according
to any one of claims 1 to 3 or a functionally
equivalent variant or fragment thereof and measuring
the amount of the known HCV protein bound

20

17. A diagnostic kit comprising the protein according to
any one of claims 1 to 3 or a functionally equivalent
variant or fragment thereof.

25 18. A method for screening chemical compounds for ability
to bind to the region of HCV responsible for binding
to a host cell, comprising measuring the binding of
a chemical compound to be screened to a protein
according to any one of claims 1 to 3 or a
30 functionally equivalent variant or fragment thereof.

35

19. A transgenic non-human mammal, carrying a transgene
encoding a protein according to any one of claims 1
to 3 or a functionally equivalent variant or fragment
thereof.

20. A process for producing a transgenic animal
comprising the step of introducing a DNA encoding a

protein according to any one of claims 1 to 3 or a functionally equivalent variant or fragment thereof into the embryo of a non-human mammal, preferably a mouse.